Atty. Docket No. 0508-1004 #7

PATENTS

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Gerard GIORDANO et al.

Confirmation No. 8083

Serial No. 10/088,117

BOX PCT

Filed March 15, 2002

NUCLEOTIDE SEQUENCES DERIVED FROM GENES CODING FOR TRIMETHYLAMINE N-OXIDE REDUCTASE, AND USES THEREOF, ESPECIALLY FOR THE DETECTION OF BACTERIA

STATEMENT TO SUPPORT FILING AND SUBMISSION IN ACCORDANCE WITH 37 C.F.R. §§ 1.821-1.825

Commissioner for Patents

Washington, D.C. 20231

Sir:

Responsive to the Official Action of May 20, 2002, a Sequence Listing is submitted concurrently herewith.

The undersigned hereby states that:

1. the submission, filed herewith in accordance with 37 C.F.R. § 1.821(g), does not include new matter;

2. the content of the attached paper copy and the attached computer readable copy of the Sequence Listing, submitted in accordance with 37 C.F.R. § 1.821(c) and (e), respectively, are the same; and

3. all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the

like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent resulting therefrom.

Respectfully submitted,

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July 22, 2002

SEQUENCE LISTING

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gacccgctcg acccctcgga ggaaggcacg ctcgacaaat acggcgacgt gaacgtgctg 2400
tcgctcgacg tcggcacctc gaagctggcg cagggcaact gcggccagac catcctcgcg 2460
gatgtcgaaa aatatgcggg cgcgccggtg acggtgaccg tgttcgacac gccgaaggga 2520
ccc 2523

<210> 7
<211> 2475
<212> DNA
<213> Rhodobacter capsulatus

<400> 7
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cgcgccgagg cgctggccaa tggcacggtg atgtcgggca gccactgggg cgtctttacc 180
gcgacggtcg aaaacggccg cgccaccgcc ttcacccccc gggaaaaaga cccgcatccg 240
acgccgatgc tggaaggcgt gctggactcg atctattcgc cgacgcggat caaatatccg 300
atggtgcggc gcgaattcct cgaaaaaggc gtgaatgctg atcgctccac ccgcggcaac 360
ggcgatttcc gtcccgtcag ctgggatcag gcgctcgatc tgcatggtcg cggcgaggtc 420
aaacgggtcg aaggagacct acggcccgca ggcgtctttg gcggctccta tggctggaaa 480
agccccgggc ggctgcacaa ttgcaccacg cttctgcgcc ggatgctgac gctggcgggc 540
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accgaagtca tggtgttctg ggccgccgat ccgatcaaga cagcagatat cggctgggtg 720
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gacctgtatg taaaggactt catcgccaac tacacctcgg gcttcgacaa gttcctgccc 960
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gacttccagt ggacgcccac ggcgcggcat gccgacatcg tgctgcccgc gacgaccagc 1560
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gcgaaggcgg tcgaa 2475

<210> 8
<211> 404
<212> PRT
<213> Rhodobacter sphareroides

<400> 8
Met Gly Arg Ser Cys Gly Gln Ala Ser Glu Ala Lys Val Ile Gly Arg
1 5 10 15

Ile Trp Lys Ala Phe Trp Arg Pro Ser Thr Lys Trp Gly Leu Gly Val
20 25 30

Leu Leu Val Thr Gly Gly Ile Ala Gly Ala Val Gly Trp Asn Gly Phe
35 40 45

His Tyr Val Val Glu Lys Thr Thr Thr Thr Glu Phe Cys Ile Ser Cys
50 55 60

His Ser Met Arg Asp Asn Asn Tyr Glu Glu Tyr Lys Thr Thr Ile His
65 70 75 80

Tyr Gln Asn Thr Ser Gly Val Arg Ala Glu Cys Ala Asp Cys His Val
85 90 95

Pro Lys Ser Gly Trp Lys Leu Tyr Arg Ala Lys Leu Leu Ala Ala Lys
100 105 110

Asp Leu Trp Gly Glu Ile Arg Gly Thr Ile Asp Thr Arg Glu Lys Phe
115 120 125

Glu Ala His Arg Leu Glu Met Ala Glu Thr Val Trp Ala Asp Met Lys
130 135 140

Ala Asn Asp Ser Ala Thr Cys Arg Thr Cys His Ser Phe Glu Ala Met
145 150 155 160

Asp Phe Ala His Gln Lys Pro Glu Ala Ser Lys Gln Met Gln Gln Ala
165 170 175

Met Asn Glu Gly Gly Thr Cys Ile Asp Cys His Lys Gly Ile Ala His
180 185 190

```
Lys Met Pro Asp Met Ala Ser Gly Tyr Arg Ala Leu Phe Ser Lys Leu
        195                 200                 205

Glu Lys Ala Ser Gln Ser Leu Lys Pro Arg Lys Gly Glu Thr Leu Tyr
    210                 215                 220

Pro Leu Arg Thr Ile Glu Ala Tyr Leu Glu Lys Pro Ser Gly Glu Lys
225                 230                 235                 240

Ala Lys Ala Asp Gly Arg Leu Leu Ala Ala Thr Pro Met Gln Val Val
                245                 250                 255

Asp Val Thr Gly Asp Trp Val Gln Val Ala Val Lys Gly Trp Gln Gln
            260                 265                 270

Glu Gly Ala Glu Arg Val Ile Tyr Glu Lys Gln Gly Lys Arg Ile Phe
        275                 280                 285

Asn Ala Ala Leu Ala Pro Ala Ala Thr Gly Ser Val Val Pro Gly Ala
    290                 295                 300

Ser Met Val Asp Pro Asp Thr Glu Gln Thr Trp Thr Asp Val Ser Leu
305                 310                 315                 320

Thr Ala Trp Val Arg Asn Arg Asp Leu Thr Gly Asp Gln Glu Ala Leu
                325                 330                 335

Trp Gln Tyr Gly Lys Gln Met Tyr Asn Gly Ala Cys Gly Met Cys His
            340                 345                 350

Val Leu Pro His Pro Glu His Phe Leu Ala Asn Gln Trp Ile Gly Thr
        355                 360                 365

Leu Asn Ala Met Lys Ser Arg Ala Pro Leu Asp Asp Glu Gln Phe Arg
    370                 375                 380

Leu Val Gln Arg Tyr Val Gln Met His Ala Lys Asp Val Glu Pro Glu
385                 390                 395                 400

Gly Ala Ala Glu
```

<210> 9
<211> 2544
<212> DNA
<213> Escherichia coli

<400> 9

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caagcggcga ctgacgctgt catctcgaaa gagggcattc ttaccgggtc gcactggggg 180
gctatccgcg cgacggtgaa ggatggtcgc tttgtggcgg cgaaaccgtt cgaactggat 240
aaatatccgt cgaaaatgat tgccggattg ccggatcacg tacacaacgc ggcgcgtatt 300
cgttatccga tggtacgcgt ggactggctg cgtaagcgcc atctcagcga tacctcccag 360
cgcggtgata accgttttgt gcgcgtgagc tgggatgaag ccctcgacat gttctatgaa 420
gaactggaac gcgtgcagaa aactcacggg ccgagtgcct tgctgaccgc cagtggttgg 480
caatcgacgg ggatgttcca taacgcttcg gggatgcgtg cgaaacgtat tgccttgcat 540
ggtaatagcg ttggtacggg cggagattac tctaccggtg ctgcgcaggt gatcctgccg 600
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cgcgtagtcg gttcgatgga agtgtatgaa cagcaaacct cctggccgct ggtattgcag 660
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gttcccgcgt cgcaggtgaa atca 2544

<210> 10
<211> 477
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence: partial
sequence coding for Salmonella typhimurium protein TorA

<400> 10
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ctctgccgac gctttaaccg tgaagcggca ttcacggaag gtcttgatga aatgggctgg 120
ctgaaacgca tctggcagga agggagccag cagggaaaag gtcgcggtat ccacttaccg 180
attttcgagg tgttctggaa tcaacaggag tacatcgagt ttgatcatcc gcagatgttt 240
gtacgccatc aggctttccg tgaagatccg gacctggagc cgttgggcac gccaagcggt 300
ttgatcgaga tttactccaa aaccatcgcc gacatgcaat acgacgatgg tcagggccat 360
cccatgtggt tcgaaaaaat cgaacgctcg catggcgggc cgggatcgca gcgctggccg 420
ctgcacttac aatccgtcca ccctgatttc cgtctgcatt cccaactgtt gcgagtc 477

<210> 11
<211> 390
<212> PRT
<213> Escherichia coli

<400> 11

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Met Arg Lys Leu Trp Asn Ala Leu Arg Arg Pro Ser Ala Arg Trp Ser
 1               5                  10                  15

Val Leu Ala Leu Val Ala Ile Gly Ile Val Ile Gly Ile Ala Leu Ile
            20                  25                  30

Val Leu Pro His Val Gly Ile Lys Val Thr Ser Thr Thr Glu Phe Cys
        35                  40                  45

Val Ser Cys His Ser Met Gln Pro Val Tyr Glu Glu Tyr Lys Gln Ser
    50                  55                  60

Val His Phe Gln Asn Ala Ser Gly Val Arg Ala Glu Cys His Asp Cys
65                  70                  75                  80

His Ile Pro Pro Asp Ile Pro Gly Met Val Lys Arg Lys Leu Glu Ala
                85                  90                  95

Ser Asn Asp Ile Tyr Gln Thr Phe Ile Ala His Ser Ile Asp Thr Pro
            100                 105                 110

Glu Lys Phe Glu Ala Lys Arg Ala Leu Leu Ala Glu Arg Glu Trp Ala
        115                 120                 125

Arg Met Lys Glu Asn Asn Ser Ala Thr Cys Arg Ser Cys His Asn Tyr
    130                 135                 140

Asp Ala Met Asp His Ala Lys Gln His Pro Glu Ala Ala Arg Gln Met
145                 150                 155                 160

Lys Val Ala Ala Lys Asp Asn Gln Ser Cys Ile Asp Cys His Lys Gly
                165                 170                 175

Ile Ala His Gln Leu Pro Asp Met Ser Ser Gly Phe Arg Lys Gln Phe
            180                 185                 190

Asp Asp Val Arg Ala Ser Ala Asn Asp Ser Gly Asp Thr Leu Tyr Ser
        195                 200                 205

Ile Asp Ile Lys Pro Ile Tyr Ala Ala Lys Gly Asp Lys Glu Ala Ser
    210                 215                 220

Gly Ser Leu Leu Pro Ala Ser Glu Val Lys Val Leu Lys Arg Asp Gly
225                 230                 235                 240

Asp Trp Leu Gln Ile Glu Ile Thr Gly Trp Thr Glu Ser Ala Gly Arg
                245                 250                 255

Gln Arg Val Leu Thr Gln Phe Pro Gly Lys Arg Ile Phe Val Ala Ser
            260                 265                 270

Ile Arg Gly Asp Val Gln Gln Gln Val Lys Thr Leu Glu Lys Thr Thr
        275                 280                 285

Val Ala Asp Thr Asn Thr Glu Trp Ser Lys Leu Gln Ala Thr Ala Trp
    290                 295                 300

Met Lys Lys Gly Asp Met Val Asn Asp Ile Lys Pro Ile Trp Ala Tyr
305                 310                 315                 320
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Ala Asp Ser Leu Tyr Asn Gly Thr Cys Asn Gln Cys His Gly Ala Pro
325 330 335

Glu Ile Ala His Phe Asp Ala Asn Gly Trp Ile Gly Thr Leu Asn Gly
340 345 350

Met Ile Gly Phe Thr Ser Leu Asp Lys Arg Glu Glu Arg Thr Leu Leu
355 360 365

Lys Tyr Leu Gln Met Asn Ala Ser Asp Thr Ala Gly Lys Ala His Gly
370 375 380

Asp Lys Lys Glu Glu Lys
385 390

<210> 12
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 12
cggvgaytac tcbachggtg c 21

<210> 13
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 13
atygatgcga tyctcgaacc 20

<210> 14
<211> 25
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 14
cgtamwsgtc gakatcgttr cgctc 25

<210> 15
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 15
gactcacaya wytgygagtg 20

<210> 16
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 16
tgrccdcgrk cgttaaagac 20

<210> 17
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 17
ccvggttcga gratcgcatc 20

<210> 18
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 18
cbgayatcst rctgcc 16

<210> 19
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 19
ggmgaytayt cbacmggygc 20

<210> 20

<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 20
twygarcgya acgaymtcga 20

<210> 21
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 21
ggvycrtacc abscvccttc 20

<210> 22
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 22
atcarrccns wvggcgtgcc 20

<210> 23
<211> 17
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 23
gbcacrtcdg tytgygg 17

<210> 24
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 24

acnccngara arttygargc 20

<210> 25
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 25
tgyathgayt gycayaargg 20

<210> 26
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 26
ccyttrtgrc artcdatrca 20

<210> 27
<211> 17
<212> DNA
<213> Artificial sequence

<220>
<223> Description of the artificial sequence:
PCR primer

<400> 27
ttngcrtcra artgngc 17